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1968-09-30

## Naval Postgraduate School Faculty Bulletin, 1968-09-30

Monterey, California, Naval Postgraduate School

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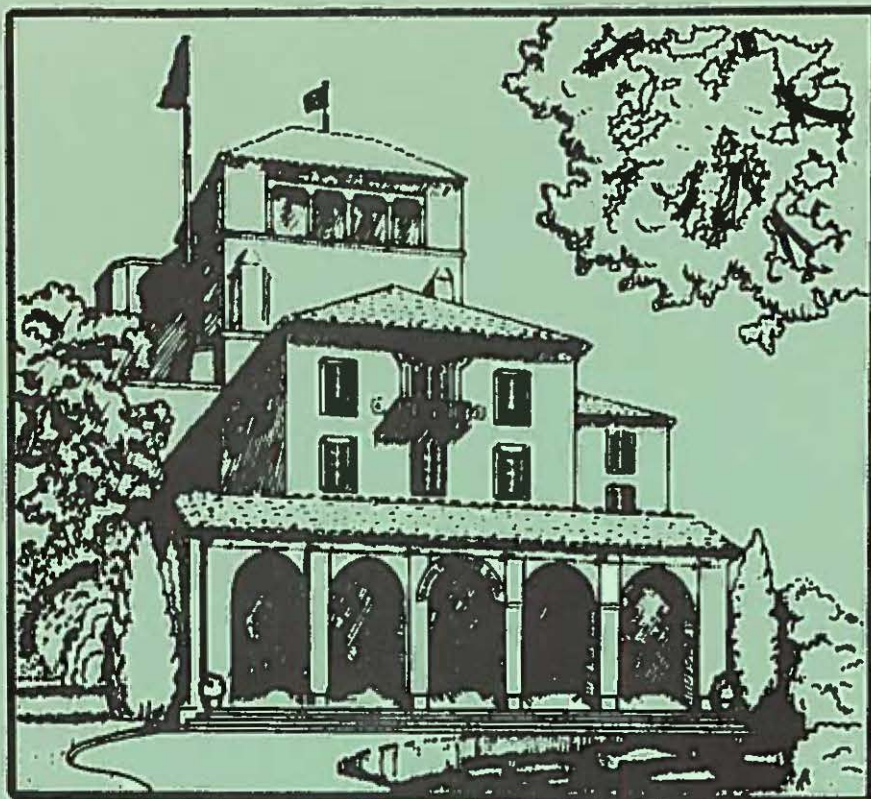
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Naval Postgraduate School

# FACULTY BULLETIN

30 September 1968

## NEW NPGS FACULTY

John A. D. Ackroyd, Visiting Associate Professor of Mechanical Engineering

Professor Ackroyd joined the Department of Mechanical Engineering in September 1968 for one year. He received the degree of B.Sc. (Engineering) in Aeronautical Engineering at Queen Mary College, University of London, in 1960, and the degree of Doctor of Philosophy in Aeronautical Engineering in 1964. His research was in the field of shock tubes. During the following two years he was employed by Queen Mary College as a research assistant to work in the field of shock tube boundary layer studies. In 1965 he was appointed Lecturer in the Department of the Mechanics of Fluids, University of Manchester, and worked in the fields of boundary layers and unsteady flows.



William P. Alexander, Assistant Professor of Political Science

Professor Alexander received the A.B. degree in English Literature from Davidson College, North Carolina, in 1954, and the M.A. degree in Political Science from Vanderbilt University in 1961. He is currently a candidate for the PhD degree in Political Science. His doctoral thesis is entitled "The Measurement of American Federalism." He has held posts as Instructor in Political Science at Marshall University, West Virginia, 1961-1963, State University of New York at Brockport, 1965-1966, and at Grinnell College, Iowa, 1966-1968. He joined the faculty of the Department of Government and Humanities in August 1968.

Henry Crew, Assistant Professor of Oceanography

Professor Crew received the B.A. degree with major in physics from Pomona College in 1955, and the M.S. degree from the University of Washington in 1958. He continued his graduate studies at Texas A and M University in the field of oceanography and will receive the PhD degree in 1969. His research was in the field of numerical hydrodynamic models. His research experience includes three years in the Physics Department of Convaair, where he was engaged in infrared and solid state physics research, and from 1962 to 1965, with the Applied Oceanography Group of Scripps Institution of Oceanography, where he was concerned with ocean diffusion and heat budget studies. He joined the faculty of the Department of Oceanography in August 1968.

Stephen Gottschalk, Assistant Professor of History

Professor Gottschalk received the B.A. degree with major in history from Occidental College in 1962, and the M.A. degree from the University of California, Berkeley, in 1963. He has taught at San Francisco State College (1964-1965) and at the University of California, Berkeley, (1966-1967). He is a candidate for the PhD degree at Berkeley. His dissertation is entitled "The Emergence of Christian Science in American Religious Life, 1885-1910." Professor Gottschalk joined the faculty of the Department of Government and Humanities in August 1968.

George W. Morris, Professor of Mathematics

Professor Morris received the B.A. degree in Mathematics in 1942 from Southwestern Institute of Technology, Oklahoma, the M.A. in Mathematics in 1947 from the University of Oklahoma, and the PhD degree in Mathematics in 1957 from the University of California at Los Angeles. His dissertation was in the field of thermo-elasticity. His fifteen years experience in the aerospace industry was primarily with North American Rockwell, Inc., where he participated in the design and development of the X-15 and B-70 aircraft, and with McDonnell Douglas Corporation, where he was associated with various missile systems developing analytical methods for the electro-magnetic energy deposition, temperature diffusion, and stress wave propagation in composite structures subjected to nuclear environments. He joined the faculty of the Department of Mathematics in September 1968.

George E. Heidorn, Assistant Professor of Operations Research and Computer Science

Professor Heidorn received the Bachelor of Mechanical Engineering degree in 1962 from the General Motors Institute while employed by the New Departure Division of General Motors Corporation. He remained there for two years after receiving his degree, working as a computer programmer/analyst in the Applied Mathematics Section. In 1964 he began graduate study in Operations Research at Yale. He was awarded the Master of Philosophy degree in 1967, and is presently completing a dissertation entitled "Natural Language Inputs to a Simulation Programming System", for the PhD degree from Yale. He joined the faculty of the Department of Operations Analysis in September 1968.

Gerald L. Musgrave, Assistant Professor of Mathematical Economics

Professor Musgrave received the B.A. degree with major in Economics from San Fernando Valley State College in 1964. Graduate study followed at Michigan State University where his PhD dissertation is in the field of Micro Economic Theory of Production Functions. At Michigan State he served as a staff programmer for the School of Labor and Industrial Relations, an Associate in the Computer Institute for Social Science Research, and in 1965 became Chief Programmer for the Counseling Center. He joined the faculty of the Department of Business Administration and Economics in August 1968.

Lieutenant Commander Winslow B. Oakes, Instructor of Meteorology

LCDR Oakes attended Rensselaer Polytechnic Institute under the NROTC program, and was awarded the B.S. degree in Petroleum Geology in 1955. He was commissioned Ensign, U. S. Navy, and in 1957 after completing flight training, was designed a Naval Aviator and assigned to Helicopter Utility Squadron Two. He completed the Meteorology curriculum at the Naval Postgraduate School in 1962 and was awarded the M.S. degree. His thesis was in the field of dynamical meteorology. His assignments following graduation have included the U. S. Fleet Weather Centrals at Suitland, Maryland, and Pearl Harbor, as Duty Forecaster and Computer Systems Officer. His most recent assignment has been with a U. S. Air Force weather reconnaissance unit in Thailand. He joined the faculty of the Department of Meteorology in August 1968.

Edward R. Rang, Professor of Aeronautics

Professor Rang attended the University of Wisconsin receiving the B.S. degree, 1949, and the M.S. degree, 1950, in Applied Mathematics and Mechanics. The PhD degree in Mathematics was granted by the University of Minnesota in 1957. His research was on nonlinear ordinary differential equations. He spent a year (1953-54) at the Naval Ordnance Test Station, China Lake, in applied mathematical analysis and the following year at Douglas Aircraft Corporation doing flutter and vibration analysis. During the academic years 1957 to 1960 he was an Assistant Professor in the Department of Aeronautics and Mechanics at the University of Minnesota. From 1960 to 1968 he was employed by Honeywell in research on automatic control and guidance theory, aerodynamics of autorotating bodies, and other problems. He joined the faculty of the Department of Aeronautics in



### Nils P. Tyvand, Assistant Professor of Mechanical Engineering

Professor Tyvand, a native of Norway, was awarded the B.S. degree in Mechanical Engineering by the Royal College of Science and Technology, Glasgow, Scotland, in 1964. In 1965 he received the M.S. degree in Mechanical Engineering from the University of Strathclyde, Glasgow, and served as Research Engineer at Corneliussen Mekaniske Verksted, Norway, conducting shock tube experiments on ventilator designs for atomic shelters. He continued his graduate studies in the Department of Aerospace Engineering at the University of Florida, and in August 1968 received the PhD degree. His research was on the hydrothermodynamics of plane laminar jets. He joined the faculty of the Department of Mechanical Engineering in September 1968.

### RESEARCH AWARDS

The following is a listing of sponsored research funds received by the Naval Postgraduate School since last announcement in the Faculty Bulletin of 2 September 1968. The projects indicated by single asterisks are continuations of existing programs.

<u>Source</u>	<u>Amount</u>	<u>Title</u>	<u>Principal Investigator</u>
U. S. Atomic Energy Commission Washington, D.C.	\$14,245	Large Scale Atmospheric Transport of Radioactive Debris	Asst. Prof. J. D. Mahlman, Meteorology
Naval Air Systems Command Washington, D.C.	\$ 2,000	*Structures in Air Frames	Assoc. Prof. U. Haupt Aeronautics
Office of Naval Research Navy Department Washington, D.C.	\$ 5,000	*Theory of Systems Analysis	Assoc. Prof. C. R. Jones Operations Analysis
Naval Personnel Research Activity San Diego, California	\$ 3,500	Effective Presentation - Lecturing, Presenting Papers & Public Address	Assoc. Prof. W. C. Boggess Government and Humanities
Naval Weapons Center China Lake, California	\$ 700	*Blast Wave Studies	Prof. G. F. Kinney Mat. Sci. & Chem.
Fleet Numerical Weather Central Monterey, California	\$ 6,000	*Ocean Current Computations	Asst. Prof. W. W. Denner Oceanography
Harry Diamond Laboratories Washington, D.C.	\$ 9,000	*Swirling Flows	Prof. T. Sarpkaya Mechanical Eng.

<u>Source</u>	<u>Amount</u>	<u>Title</u>	<u>Principal Investigator</u>
Naval Air Systems Command Washington, D.C.	\$ 1,500	Aircraft Instrumentation	Assoc. Prof. D. M. Layton Aeronautics
Naval Supply Systems Command Washington, D.C.	\$ 3,993	*Naval Supply	Prof. W. P. Zehna Operations Analysis
Naval Air Systems Command Washington, D.C.	\$35,000	*Hybrid Compressor Study	Prof. M. H. Vavra Aeronautics
Naval Air Systems Command Washington, D.C.	\$25,000	Burning-to-Detonation Transition in High Explosives	Prof. J. E. Sinclair Mat. Sci. & Chem.
Office of Naval Research Navy Department Washington, D.C.	\$18,770	Examination of Spectrometric Oil Analysis Program	Assoc. Prof. H. J. Larson Operations Analysis

#### PRINCIPAL PROFESSIONAL ACTIVITIES

Professor Eugene C. Haderlie of the Department of Oceanography presented a paper entitled "Fouling in Deep Water in Monterey Bay" at the First International Biodeterioration Symposium sponsored by the Coastal Engineering Research Council of the ASCE and The British Institution of Civil Engineers. The meeting was held in London, England, 16-20 September.

Professor Gilbert F. Kinney, Chairman of the Department of Material Science and Chemistry, presented a paper entitled "Short-Term Creep of Simplified Composites" at the Golden Gate Metals Conference, American Society for Metals, held in San Francisco 25-27 September.

Associate Professor Donald M. Layton of the Department Aeronautics has been named Chairman of the Steering Committee of the Annual Reliability and Maintainability Conference. The Conference is co-sponsored by AIAA, SAE, and ASME with other participating societies, and will be held in Denver in July 1969. Professor Layton is serving his second year as the AIAA delegate to the Steering Committee.

Associate Professor Robert T. Renard of the Department of Meteorology described the NPGS-FNWC efforts in developing the Navy's Tropical-Storm Forecast Scheme to 13 participants in the Naval Environmental Data Network Enlisted Training Course, at FNWC on 13 September 1968.

Reviews by Dean R. F. Rinehart of the following papers have recently been published:

"The Canonical Form of the Product of Symmetric Matrices."  
(Russian) By A. I. Filin, Mathematical Reviews, Vol. 36, No. 3,  
September 1968, p. 536.

